

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2005/009656

## A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl.<sup>7</sup> H01S5/227

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int. Cl.<sup>7</sup> H01S5/00-5/50, H01L33/00, 21/205, 21/31, 21/365, 21/469, 21/86

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho	1922-1996	Jitsuyo Shinan Toroku Koho	1996-2005
Kokai Jitsuyo Shinan Koho	1971-2005	Toroku Jitsuyo Shinan Koho	1994-2005

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	JP 03-053582 A (NEC Corp.), 07 March, 1991 (07.03.91), Page 4, upper right column, line 6 to lower right column, line 13; Fig. 3 (Family: none)	1, 8, 11-16 2-7, 9, 10
Y	JP 2000-260714 A (NEC Corp.), 22 September, 2000 (22.09.00), Par. No. [0011]; Fig. 3 & US 6300153 B1	2-7
Y	JP 61-180493 A (Matsushita Electric Industrial Co., Ltd.), 13 August, 1986 (13.08.86), Fig. 2; page 3, upper right column, line 7 to lower left column, line 4 (Family: none)	2-7

☒ Further documents are listed in the continuation of Box C.☐ See patent family annex.

## \* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
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- "O" document referring to an oral disclosure, use, exhibition or other means
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- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
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- "Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

Date of the actual completion of the international search  
30 June, 2005 (30.06.05)Date of mailing of the international search report  
19 July, 2005 (19.07.05)Name and mailing address of the ISA/  
Japanese Patent Office

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Facsimile No.

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 2004-119467 A (Mitsubishi Electric Corp.), 15 April, 2004 (15.04.04), Par. Nos. [0020] to [0047]; Figs. 1 to 15 & US 2004/0057483 A1	2-7
Y	JP 2001-298240 A (NEC Corp.), 26 October, 2001 (26.10.01), Par. No. [0011]; Figs. 9 to 14 & US 2001/0030327 A1 & EP 1146616 A2	9,10
Y	JP 2003-060311 A (Nippon Telegraph And Telephone Corp.), 28 February, 2003 (28.02.03), Par. Nos. [0016] to [0042]; Figs. 1 to 3 & US 2003/0067010 A1 & EP 1286435 A2	9,10